APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,084	11/10/1999	GREGG EVAN ROTHERMEL	6954-2	8859

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EXAMINER
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ART UNIT	PAPER NUMBER
2122	4

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)
Office Action Summary	09/438,084		ROTHERMEL ET AL.
	Examiner		Art Unit
	Ted T. Vo		2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 1999* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) *32-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31, 43-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *32-42* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .

4) ☒ Interview Summary (PTO-413) Paper No(s). *4* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

1.   This action is in response to the communication filed on 11/10/1999.

Claims 1-55 are original claims.

Claims 32-42 are subject to restriction/election.

Claims 1-55 are pending in the application.

Specification

2.   The abstract of the disclosure is objected to because the abstract fail to meet abstract format

requirement. The abstract of this disclose has more than one paragraphs. The abstract should be in

narrative form and generally limited to a single paragraph within the range of 50 to 250 words. Correction

is required. See MPEP § 608.01(b).

Election/Restrictions

3.   Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I.   Claims 1-31, 43-55 are drawn to methods, a computer readable medium, and a system

         for providing a method of testing spreadsheet cells. The method is for collecting test

         elements, tracking execution trace, and marking participated elements in the execution

         trace. The group is classified in class 717, subclass 128.

   II.   Claim 32 is drawn to a batch-collecting method that is for identifying all cells in a group,

         and collecting test elements in the identified cells, classified in class 709, subclass 101.

   III.   Claims 33-42, are drawn to methods for indicating a completion of a test by calculating a

         testedness of test elements, classified in class 717, subclass 131.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, and III are unrelated. Inventions are unrelated if it can be shown that they are not

disclosed as capable of use together and they have different modes of operation, different functions, or

different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the invention I has a separate

utility for providing a method of testing spreadsheet cells, the invention II has a separate utility for batch-

collecting that identifies all cells in a group, the invention III has a separate utility for indicating a

completion of a test by calculating a testedness of test elements.

Because these inventions are distinct for the reasons given above and have acquired a separate

status in the art as shown by their different classification, restriction for examination purposes as indicated

is proper.

During a telephone conversation with applicant's representative on 3/4/03 a provisional election

was made **with traverse** to prosecute the invention of group I, claims 1-31, 43-55. Affirmation of this

election must be made by applicant in replying to this Office action. Claims 32-42 are withdrawn from

further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a
printed publication in this or a foreign country, before the invention thereof by the applicant for a
patent.

Claims 1-31, 43-55 are rejected under 35 U.S.C. 102(a) as being anticipated by DuPuis, "What

You See Is What You Test: A Methodology for Testing Form-Based Visual Programs", 4-1998

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per claim 3:

"In a computerized spreadsheet containing a plurality of spreadsheet cells, a method for testing a first spreadsheet cell containing a formula, the method comprising:

collecting one or more test elements for the first spreadsheet cell (page 201, second column: Task 1);

tracking an execution trace of the first spreadsheet cell (page 202, second column: task 2); *and marking as exercised a subset of the test elements that participated in the execution trace for the first spreadsheet cell* (page 203, first column: task 3);

DuPuis discusses three tasks in testing a cell of a form-based visual program. The first task is to collect a formula or a portion of programs that represent the cell (see page 201, figure 4). The second task is to trace the execution of the formula or the portion (see page 202, second paragraph, Task 2). The third task is to validate the execution of the cell (see page 203, first paragraph, task 3).

As per claim 4: Claim is inherent from testing the first cell in claim 3 that is repeated to another cell.

As per claim 5: See task 1; it is du-associations.

As per claim 6: See task 1, the static du-associations are collected.

As per claim 7: See task 1, where the steps of identifying is inherent from the definition of du-associations.

As per claim 8: See task 2; Tracking execution traces.

As per claim 9: See task 3, which is associated with tasks 1-2 and checkmark (page 203: task 3).

As per claim 10: See task 3 and figure 6, where an exercise in the figure is included with du-associations and a checkmark on the right-top corer.

As per claim 11: See task 3 and figure 6, where an exercise in the figure is included with a du-association and a checkmark on the right-top corer.

As per claim 12: See tasks 1-3.

As per claim 13: See task 3 (page 203, first column) and validation tab.

As per claim 14: See task 3 (page 203, first column) and validation tab, where the validation tab is displayed with either blank or a checkmark.

As per claim 15: See task 3 (page 203, first column) and figure 6, for displaying the validation tab.

<u>As per claim 16</u>: See task 4 (page 204, first column: Deleting a cell or change a cell's formula) and recalculation of task 3.

<u>As per claim 17</u>: See task 4 (page 204, first column) with the reflection of new test adequacy status.

<u>As per claim 18</u>: See task 4 (page 204), where the new test status is provided with changing validation tab (see figure 8: UnValidate (C)).

<u>As per claim 19</u>: See task 4 (page 204), where the validation tab is also included with question mark (see task 3, and figure 8).

<u>As per claim 20</u>: The update test results the display (page 204, second column).

<u>As per claim 21</u>: The update test results the display of checkmarks and question marks into question marks (page 204, second column).

<u>As per claim 22</u>: Claims is inherently in the mean of the symbols, checkmark and questionmark, used for validation and uncertainty.

<u>As per claim 23</u>: See task 4 (page 204), where updating test status provides adjusting validation tab statuses.

<u>As per claim 24</u>: See task 4 (page 204, deleting cell's formula).

<u>As per claim 25</u>: See task 4 (page 204, deleting cell's formula), where updating test status provides adjusting validation tab statuses.

<u>As per claim 26</u>: See algorithm of figure 7.

<u>As per claim 27</u>: See task 4 with updating.

<u>As per claim 28</u>: See task 3 with validation.

<u>As per claim 29</u>: See data analysis (page 206, first column).

<u>As per claim 30</u>: See figure 6.

<u>As per claim 31</u>: Claim is inherent in the step collecting test elements in the first spreadsheet cell.

<u>As per claim 1</u>:

Claim 1 is a test method that has claimed functionality corresponding to the claim functionality of claim 3, where,

the teaching of claiming creating a first formula graph corresponds to C's formula graph (see task 2),

the teaching of claiming collecting one or more du-associations corresponds to a collection of static du-

assocations (see task 1), the teaching of tracking an execution trace corresponds to the tracking of

execution trace on formula graph (see task 2), the teaching of claiming mark as exercised corresponds to

the validation (see task 3).

Claim 1 is rejected in the same reason set forth in connecting to the rejection of claim 3.

As per claim 2: Claim is inherent from testing the first cell in claim 1 that is repeated to another cell.

As per claim 43:

Claim 43 is computer readable medium that has claimed functionality corresponding to the claim

functionality of claim 3, where the teaching of claiming test element data structure corresponds to a

collection of spreadsheet's cells or static du-assocations (see task 1), the teaching of claiming trace data

structure corresponds to the tracking of execution trace on formula graph (see task 2), the teaching of

claiming mark as exercised corresponds to the validation (see task 3).

Claim 43 is rejected in the same reason set forth in connecting to the rejection of claim 3.

As per claim 44: See figure 8.

As per claim 45: See execution trace in task 2 and figure 8.

As per claim 46: See figure 3 and figure 7.

As per claim 47: See figure 5, du-assocations.

As per claim 48: See figure 6 and figure 7, "checkmark".

As per claim 49: The update test results the display of checkmarks and question marks into question

marks (page 204, second column).

As per claim 50: The update test results the display of checkmarks and question marks into blank (page

204, second column).

As per claim 51:

Claim 51 is a system that has claimed functionality corresponding to the claim functionality of claim 43,

Claim 51 is rejected in the same reason set forth in connecting to the rejection of claim 43.

As per claim 52: Claim 52 is a system that has claimed functionality corresponding to the claim functionality of claim 46, Claim 52 is rejected in the same reason set forth in connecting to the rejection of claim 46.

As per claim 53: Claim 53 is a system that has claimed functionality corresponding to the claim functionality of claim 47, Claim 53 is rejected in the same reason set forth in connecting to the rejection of claim 47.

As per claim 54: Claim 54 is a system that has claimed functionality corresponding to the claim functionality of claim 48, Claim 55 is rejected in the same reason set forth in connecting to the rejection of claim 48.

As per claim 55: Claim 55 is a system that has claimed functionality corresponding to the claim functionality of claim 49, Claim 55 is rejected in the same reason set forth in connecting to the rejection of claim 49.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wilcox et al., " Does continuous visual feedback aid debugging in direct-manipulation programming systems?", ACM, pages: 258-265, 1997.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (703) 308-9049. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789. The fax phone numbers for this Group are:

Official: (703) 746-7239.

After Final: (703) 746-7238.

Non-Official: (703) 746-7240.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

TTV
March 4, 2003

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